

## PATENT SPECIFICATION

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## (54) IMPROVEMENTS RELATING TO HAIR DRYERS

(71) We, ETABLISSEMENTS LARDENOIS S.A., a French Body Corporate of 60370 Hermes, France, do hereby declare the invention for which we pray that a Patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to hair dryers, and in particular concerns a brush head in or for a hair dryer, for the effective treatment of the hair to enable brushing, drying, waving and combing of the hair.

Conventionally, the drying of hair as occurs in waving and curling the hair involves either the use of a hot air blower, or heated air working tongues. The hot air blower is used more extensively, and when manipulated by a hairdresser in conjunction with a combing or brushing device provides a means whereby the hair may be waved and styled, the hot air being directed to the region whereat the hairdresser is manipulating the hair with the comb or brush.

The two actions, i.e. the action of the hot air and the action of the mechanical working of the hair by means of a comb or brush complement each other, the brushing or combing enabling the hair to be disentangled and separated, and this in turn facilitates the passage of hot air through the hair, and furthermore the hot air makes the hair supple and more workable and therefore renders the mechanical action of the brush or comb more efficient.

However, experience has shown that the utilisation of a comb and brush in conjunction with a hair dryer in the conventional manner does not produce an efficient means for the shaping and styling of the hair. This is more often achieved by the use of rollers or curlers which have to be inserted in the hair for a pre-determined period, during which the hair in rollers or curlers is dried by a flow of hot air.

It is desired of the brush head of the present invention that it should be capable effectively of treating the hair which is more

effective for providing waving or curling of the hair than the utilisation of a separate air blowing device and a separate comb or brush.

In accordance with the present invention there is provided in or for a hair dryer of the type having a blower for blowing air onto the hair and a heating means for heating the air, brush head, said head being for attachment to the hairdryer or forming part of the dryer such that said hot air passes into the head and issues from slots in the head for drying the hair and so as to heat heat-conducting bristles of the head by which the hair can be brushed and which are carried by a convex, resiliently deflectable membrane carried by a heat insulating plate portion so that there exists a pocket of air between the membrane and said plate portion and so that the said membrane can deflect resiliently in use and will be shielded from the hot air flow by the said plate portion, said slots being located at the periphery of the plate portion.

By arranging for the flow of hot air to heat the heatconducting bristles, additional heat can be applied to the hair from the bristles during the mechanical working of the hair, adding to the waving or curling effect.

The mounting of the bristles on a resiliently deflectable membrane prevents the bristles from being applied to the head in an inflexible manner and the user will not suffer any undue discomfort as a result of the utilisation of such a flexible membrane. The bristles will therefore deflect as a result of deflection of the membrane, but the membrane will return the bristles to the initial position when brushing is terminated.

The bristles will in particular be heated by the flow of hot air when the brush is between the brushing strokes, and will act as a heat sink. The bristles furthermore will penetrate deeply into the hair, and will provide a means whereby the hair can be dried quicker than simply blowing hot air thereonto.

By arranging for a heat insulating plate

between the membrane and the flow of hot air, ensures long life of the membrane.

If the plate portion with the membrane and bristles is removable as a unit, a highly satisfactory arrangement results, because this unit may be replaced by a hair manipulating item, such as a comb, of different configuration.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawing, wherein:—

Figure 1 is an exploded perspective view of a brush head according to the present invention;

Figure 2 is a plan of the brush head shown in Figure 1;

Figure 3 is a longitudinal section of the brush head shown in Figures 1 and 2, the section being taken on the line III—III in Figure 2; and

Figure 4 is a transverse section of the brush head shown in Figures 1 to 3, the section being taken on the line IV—IV in Figure 3.

Referring to the drawings, the brush head 1 as will be seen in Figure 1 comprises a hollow body 3 of generally elongated form having circular opening at one end so that the body can be clipped to a hose 2 of a hair dryer having a blower and a heating means whereby hot air can be blown through hose 2 and into the interior of body 3. The body 3 has a generally rectangular side opening 4 which receives a plate portion 5 of rectangular form but provided with side recesses 11. The plate portion 5 is adapted to locate in the opening 4 so that tongues 6 at the ends of the plate portion 5 engage respectively in a recess 7 on the body and under an edge of the body adjacent said opening 4 as shown clearly in Figure 3. A support bar 8 extends across the interior of body 3 for the support of one end of the plate portion 5. Reference numeral 8 is also utilised to illustrate support lugs on the interior of the body for the correct positioning of the plate portion 5 in aperture 4. The plate portion 5 is clipped into position and can be removed and replaced as desired with other plate portions for performing other operations on the hair.

When the plate portion 5 is in position, the recesses 11 together with the side portions of the body 3 defining the aperture 4, from hot air outlet apertures 12 from which the hot air flows when the head is in use.

On one side, the side which faces away from the interior of the body 3 when in position, the plate portion 5 carries a convex resilient deflectable membrane 9 and the membrane 9 in turn supports a plurality of

heat conductive bristles 10.

When the brush is in use, as the bristles engage the scalp, so the membrane 9 will deflect, in order to avoid discomfort to the user, but the membrane returns to the initial position when the brush is not in use.

Between the membrane 9 and the plate portion 5 is a pocket of air 13 to enhance the resilience for deflection of the membrane 9.

Although the plate portion 5 is shown as being removable, it could alternatively be fixed to the body 3.

When the head is in use, hot air is blown through the body 3 and out of the apertures 12, and as it issues from the apertures, the hot air will impinge upon the heat conducting bristles 10 and will heat same, and the heat retained in the bristles will assist in the waving or curling of the hair in use. When the head engages the hair, the hot air which issues from apertures 12 will also impinge directly upon the hair exercising a drying effect thereon.

It is to be noted that the plate portion 5 shields the membrane 9 from coming into direct contact with the flow of hot air through the body 3.

#### WHAT WE CLAIM IS:—

1 In or for a hair dryer of the type having a blower for blowing air onto the hair and heating means for heating the air, a brush head, said head being for attachment to the hair dryer or forming part of the dryer such that said hot air passes to the head and issues from slots in the head for drying the hair and so as to heat heat-conducting bristles of the head by which the hair can be brushed which are carried by a convex, resiliently deflectable membrane carried by a heating insulating plate portion so that there exists a pocket of air between the membrane and said plate portion and so that the said membrane can deflect resiliently in use and will be shielded from the hot air flow by said plate portion, said slots being located at the periphery of the plate portion.

2 In or for a hair dryer, a brush head as claimed in Claim 1, wherein the head has a hollow body having an opening which is partially closed by said plate portion so that said body and plate portion together define said slots.

3 In or for a hair dryer, a brush head according to Claim 1 or Claim 2, wherein the said plate portion is removably connected to said body.

4 In or for a hair dryer, a brush head according to any preceding Claim, which is detachable from the remainder of the hair dryer or is for detachable connection thereto.

5 In or for a hair dryer of the type having

a blower for blowing air onto the hair and a heating means for heating the air, a brush head substantially as hereinbefore described with reference to the accompanying drawing.

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